

TER-MINASYAN, G.S.; GORBATSEVICH, A.A.

Use of gas-burning snow melters in Moscow's housing economy.  
Gor.khoz.Mosk.28 no.2:41-42 F '54. (MLRA 7:5)  
(Snow removal)

GORBATSEVICH, A. B.

FD 241

USSR/Medicine - Physiology

Card 1/1

Author : Gorbatsevich, A. B.

Title : Various depths of hypnotic inhibition and methods of detecting them

Periodical : Fiziol.zhur. 2, 148-154, Mar/Apr 1954

Abstract : Verbal stimuli from other than the hypnotist make it possible to determine the depth of hypnotic inhibition in the cortex of large hemispheres. Use of verbal stimuli in conjunction with kinesthetic method of analysis of phasic symptoms makes possible a much deeper view of the physiological and pathophysiological mechanisms of hypnotic sleep in man. The highest degree of inhibition that takes place in the cortex of large hemispheres during hypnotic sleep is characterized by absence of any kind of reaction to a verbal irritant (emanating from someone other than the hypnotist); during this stage it is possible to form a new defense line in cortex with the aid of verbal-kinesthetic methods. Five references, all USSR.

Institution : Clinic of Nervous Diseases, Military Medical Academy imeni S. M. Kirov

Submitted : December 24, 1952

GORBATSEVICH, A.B.(Leningrad)

Conditioned reflex technique for inducing normal and hypnotic sleep.  
Klin. med. 33 no.9:64-65 S '55. (MLRA 9:2)

(REFLEX, CONDITIONED,  
prod. of normal & hypnotic sleep)

(SLEEP,  
conditioned reflex induction)

(HYPNOSIS,  
conditioned reflex induction of hypnotic sleep)

(REFLEX CONDITIONED,  
conditioned normal & hypnotic sleep)

GORBATSEVICH, A. B.

"The Dynamics of the Reflex Function of the Nervous System in Patients Who Have Undergone Surgery Under Hypothermia," from the book Theses of the Reports of the Scientific Session of the Military Medical Academy im. S. M. Kirov, Tezisy Dokladov Nauchnoy Sessi, Leningrad, 29 Oct-2 Nov 1956.

GORBATSEVICH, A.B.

Pathomorphological changes in cerebral hemorrhage. Zhur.nevr. i  
psikh. 56 no.6:467-471 '56. (MIRA 9:8)

1. Iz kafedry nervnykh bolezney Voenno-meditsinskoy akademii imeni  
S.M.Kirova.

(CEREBRAL HEMORRHAGE, etiol. and pathogen.

pathol. changes & decomposition of nerve cells & vasc.  
walls due to various dis.)

(BRAIN, dis.

pathol. changes & decomposition of nerve cells & vasc.  
walls in various dis., causing cerebral hemorrh.)

G. ORBATSEVICH, A. B.

GORBATSEVICH, A.B.

Some methods in hypnotic sleep therapy. Zhur.nevr. i psikh.  
Supplement:48 '57. (MIRA 11:1)

1. Voenno-meditsinskaya akademiya imeni S.M.Kirova.  
(HYPNOTISM--THERAPEUTIC USE)

EXCERPTA MEDICA Sec 9 Vol 13/6 Surgery June 59

3095. FUNCTIONAL CHANGES IN THE DYNAMICS OF THE NERVOUS SYSTEM IN PATIENTS OPERATED UPON UNDER HYPOTHERMIA (Russian text) - Gorbatshevich A. B. - VESTN. KIR. 1958, 80/3 (110-117) illus. 2

In patients with a body temperature of 29.5-28.5°C. there is muscular hypotonia, a decrease of vegetative and absence of somatic reflexes. Still, even in cases of deep hypothermia most traumatic surgical manipulations elicit reflex cardiovascular responses that may be divided conventionally into 3 degrees by cardiographic readings: oscillation of pulse, respiration and blood pressure. These data suggest that in highly traumatic surgery it is rational to do an accessory blockade of reflexogenic zones as a supplement to the anaesthesia used. Postoperatively the function of the nervous system is swiftly restored to normal. In cases of hypothermia, duly induced, complications pertaining to the nervous system do not occur.

GORBATSEVICH, A.B.

BORODIN, I.M., (Leningrad, Botkinskaya ul., d.17, kv.9) GORBATSEVICH, A.B.,  
LEBEDEV, L.V., PANASHCHENKO, A.D.

Results from the use of di-isopropylputrescine in potentiated  
anesthesia and hypothermia. [with summary in English]. Vest.khir.  
80 no.4:95-100 Ap'58 (MIRA 11:5)

1. Iz kliniki fakul'tetskoy khirurgii No.1 (nach. - prof. V.N. Shamov)  
Voyenno-meditsinskoy ordena Lenina akademii im. S.M.Kirova.

(AMINES, ther. use

di-isopropylputrescine as ganglion-blocking adjuvant  
in artif. hibernation & hypothermia (Rus))

(AUTONOMIC DRUGS, ther. use

same)

(HIBERNATION, ARTIFICIAL

adjuvant di-isopropyl-putrescine (Rus)



SAMOTOKIN, B.A.; SHUSTIN, V.A.; GORBATSEVICH, A.B.

"Problems in modern neurosurgery." Reviewed by B.A.Samotokin,  
V.A.Shustin, A.B.Gorbatsevich. Vop.neirokhir. 23 no.4:57-60  
J1-Ag '59. (MIRA 12:10)

(NERVOUS SYSTEM--SURGERY)

SAMOTOKIN, B.A.; GORBATSEVICH, A.B.; SHUSTIN, V.A.

Use of hypothermia in neurosurgical operations. Vop.neirokhir.  
24, no.1:21-26 Ja-F '60. (MIRA 13:10)  
(HYPOTHERMIA) (BRAIN—SURGERY)

RYZHKOV, S.V.; GORBATSEVICH, A.B.

Electric defibrillation in sudden cardiac arrest in surgical  
patients, Vest, khir, 84 no. 1:51-56 Ja '60, (MIRA 13:10)  
(HEART FAILURE)

GORBATSEVICH, A.B.

Changes in cardiac activity in patients operated on with the use  
of neuroplegic preparations and physical cooling. Vest. khir. 85  
no. 7:82-91 Je '60. (MIRA 14:1)  
(HYPOTHERMIA) (HEART) (AUTONOMIC DRUGS)

28(1), 25(2)(7)

S/118/60/000/02/002/024  
D001/D001

AUTHOR: Gorbatsevich, A.F., Engineer

TITLE: Automatic Lines<sup>14</sup> of Broaching Machines

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva,  
1960, Nr 2, pp 5-9 (USSR)

ABSTRACT: Spetsial'noye Konstruktorskoye Byuro Nr 8 (Special Design Bureau Nr 8), of Minskiy zavod avtomaticheskikh liniy (Minsk Automatic Lines Plant) designed an automatic line (Figure 1) of three broaching machines for Khar'kovskiy zavod "Serp i Molot" (Khar'kov "Serp i Molot" Plant). The line will machine the rocker arms of "SMD-1" tractor diesel-engine valves. One of the three broaching machines, the vertical "MP-56" (Figure 2), was designed specially for the line. The other two are horizontal "MP-11" continuous broaching machines produced in series by the Zavod imeni Kirova (Plant imeni Kirov) and re-equipped for application in the automatic line. The article contains detailed de-

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Automatic Lines of Broaching Machines

sign and operation information of the line and separate machines. The "MP-56" is a semi-automatic machine for internal broaching and has a turning table and an automatic discharging device. The base portion of its frame is used as container for the cutting fluid. The main drive is hydraulic and the electrical equipment for the machine and the entire line is housed in the table base. The blanks are charged manually by the operator seated on the platform shown in the photograph, with the control board in front of him. Each of the four stations of the rotary table holds six blanks at a time. Blanks are moved from the "MP-56" into the "MP-11" by a specially designed chain with grips. The "MP-11" machines (Figure 5) which broach the two flat and radial surfaces of the rocker arms, have a traction chain with clamps for the work which pulls it past the stationary broaching tool washed over by cutting fluid. The recharging mechanism between two

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D001/D001

Automatic Lines of Broaching Machines

"MP-11" (Figure 4) charges surplus blanks into a trough, to avoid a bottleneck in the last machine. A second automatic line of broaching machines, designed by "SKB-8" and produced at Minskiy Stankostroitel'nyy zavod imeni Kirova (Minsk Machine Tool Plant imeni Kirov) for Krasnoluchskiy mashinostroitel'nyy zavod (Krasnyy Luch Machine Building Plant), is intended for broaching the teeth of coal cutter-loaders and consists of two "MP-11" continuous horizontal broaching machines, with a capacity of 1300 parts an hour. A third automated broaching line designed by the "SKB-8" is being produced at Minsk Automatic Lines Plant. The line is intended for machining the cylinder block surfaces of "SMD-1" tractor engines at Khar'kov "Serp i Molot" Plant. There are 4 diagrams and 1 photograph.

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PHASE I BOOK EXPLOITATION SOV/5861

Gorbatsevich, Aleksandr Feliksovich, Vladimir Petrovich Kuznetsov, and  
Lev Grigor'yevich Yudovin

Avtomaticheskiye linii iz protyazhnykh stankov i avtomatizatsiya  
prot'yagivaniya (Automatic Broaching Lines and Automation in  
Broaching) Minsk, Gosizdat BSSR, 1961. 110 p. 1500 copies  
printed.

Ed.: S. Pol'skiy; Tech. Ed.: G. Domovskaya.

PURPOSE : This booklet is intended for tool engineers and  
technicians concerned with broaching operations and equipment.

COVERAGE: The booklet reviews various types of broaching machines.  
Detailed descriptions and illustrations are provided for some  
of these machines. Also discussed are the development of  
automation and automatic broaching lines and their fixtures.  
There are 19 references: 12 English, 5 Soviet, 1 Czech, and  
1 German.

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Automatic Broaching Lines and (Cont.)

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Automatic Broaching Lines and (Cont.)

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Automatic Broaching Lines and (Cont.)

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22. Automatic line for machining the handles of adjustable  
wrenches 106

Bibliography 109

AVAILABLE: Library of Congress

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DV/wrc/jw  
1/17/62

GORBATSEVICH, Aleksandr Feliksovich [Horbatssevich, A.F.]; KUZNETSOV,  
Vladimir Petrovich; GORANSKIY, G.K., kand. tekhn. nauk, red.;  
TIMOFEYEV, L., red. izd-va; TURTSEVICH, L., tekhn. red.

[Automatic lines for manufacturing gear wheels] Avtomaticheskie  
linii dlia proizvodstva zubchatykh koles. Minsk, Izd-vo Akad.  
nauk BSSR, 1961. \* 132 p. (MIRA 15:1)  
(Gear-shaping machines) (Automation)  
(Gear-cutting machines)

S/122/61/000/004/003/007  
D211/D303

AUTHOR: Gorbatsevich, A.F., Engineer  
TITLE: Modern tendencies in the automation of production  
of cylindrical gear wheels  
PERIODICAL: Vestnik mashinostroyeniya, no. 4, 1961, 55-58

TEXT: The author states that the automation of production of cylindrical gear wheels has not proved to be an economical proposition if present day technological processes are used. The installation of automatic lines for producing small-sized gear wheels, prepared either by machining or hot rolling, presents many problems which have to be investigated. The Laboratoriya avtomatisatsii (Laboratory of Automation) carried out a series of experiments on mass produced gear wheels, made at M33 (M24) factory in order to establish a criterion for the efficient automation of mass produced gear wheels. The qualitative measurements were based on the following parameters: a) The distance between the centers of the master

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D211/D303

Modern tendencies...

and the gear wheel investigated, when the two are engaged without clearance, and b) the accuracy of the center bore, this being a technological basis for further machining operations. It has been shown that the increase in variation of parameter a) can be attributed to the incorrect geometrical form of the wheel, i.e. when the wheel is held in the chuck, the center bore will not be correctly positioned. The intermediate technological processes which a gear wheel has to undergo affect the final accuracy of the gear wheel to an extent which can only be determined experimentally. Such experiments were carried out at MZZ on small gear wheels; the results are shown in Fig. 2. This shows the variation in parameter a) where 1 - the variation in a) after milling the teeth, 2 - variation in a) after shaving the teeth, 3 - variation in a) after hardening the wheel. The wheels were case hardened before the shaving operation took place. Fig. 2 shows that case hardening affected most of the spread in parameter a). A similar experiment was carried out which related the variation in parameter a) to the following technological processes: 1 - teeth milling, 2 - teeth shaving,

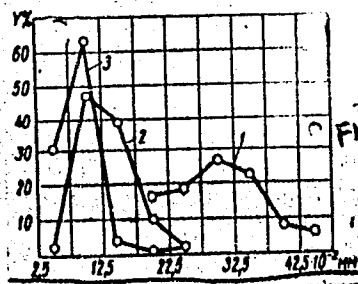
Card 2/3

Modern tendencies...

S/122/61/000/004/003/007  
D211/D305

3 - case hardening, 4 - center bore cutting etc. Results of these experiments proved that center bore cutting upset parameter a) most. The author concludes that before the manufacture of cylindrical gear wheels can be automated considerable improvements must be made in the technological processes involved. There are 7 figures and 5 Soviet-bloc references.

Fig. 2



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GORBATSEVICH, A.F.; VLADIMIROV, Ye.V.

Effect of some technological factors on the precision of  
gears in line production. Sbor.trud.Inst.mash.i avtom.AN BSSR  
no.1:56-77 '61. (MIRA 16:5)

(Gear cutting)

KUZNETSOV, Vladimir Petrovich; GORBATSEVICH, Aleksandr Feliksovich;  
VANCHUK, L., red.

[Adjustable continuous lines] Peronulazhivaemye avtomati-  
cheskie linii. Minsk, Belarus', 1964. 199 p.

(MIRA 18:1)

GORBATSEVICH, A.V., kand.med.nauk; SHUSTIN, V.A., ~~kand.med.nauk~~ (Leningrad)

Diagnosis and surgical treatment of chronic subdural hematomas.  
Vop.neirokhir. no.5:21-23 '61. (MIRA 14:11)

1. Klinika neyrokhirurgii Voenno-meditsinskoy ordena Lenina  
akademii imeni S.M. Kirova.  
(HEMATOMA) (DURA MATER---TUMORS)

USSR / Human and Animal Physiology. Thermoregulation. T

Abs Jour: Ref Zhur-Biol., No 9, 1958, 41096.

Author : Gorbatsevich, L. I.

Inst : Institute of Experimental Medicine, Academy of  
Medical Sciences, USSR, Leningrad.

Title : Changes in the Functional Status of the Thermoregu-  
lating Centers in Some Disturbances of the Higher  
Nervous Activity in Dogs.

Orig Pub: Yezhegodnik, In-t eksperim. med. Akad. med. nauk  
SSSR, 1955 L, 1956, 136-141.

Abstract: On the basis of the notion that conflict represents  
a simple form of psychic trauma, the author studied  
the course of fever (F) produced by injection of a  
culture of *Bacteria mesenterica* before and after  
conflict and disturbance of the higher nervous act-  
ivity (HNA). Following conflict, the nature of F

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USSR / Human and Animal Physiology. Thermoregulation. T

Abs Jour: Ref Zhur-Biol., No 9, 1958, 41096.

Abstract: changed sharply, the usual elevation of  $T^{\circ}$  did not follow. Apparently, disturbances of HNA in any degree spread to the subcortical structures and temporarily suppress the febrile reaction. -- I. G. Kostenko.

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EXCERPTA MEDICA Ser 2 Vol 12/2 Physiology Feb 59

730. EXPERIMENTAL DATA RELATING TO THE QUESTION OF THE PART PLAYED BY THE NERVOUS SYSTEM IN THE PATHOGENESIS OF FEVER (Russian text) - Gorbatshev, L. I. From the Symposium: FIZIOL. MEKHANIZMY LIKHORADCHN. REAKTSII (Medgiz, Leningrad) 1957 (209-240)

Characteristic of the febrile reaction (FR) of dogs and rabbits, whose spinal cords were cut at the level of C4-D1, to s.c. injections of culture of Bacillus mesentericus was the presence of a stage of early hypothermia and the subsequent development of FR proper. The removal of the cervical sympathetic ganglia and the abdominal sympathetic chain and the denervation of the adrenals also modified the course of FR. However, neither the cutting of the spinal cord nor the excision of the sympathetic system could deprive the organism of its capacity for FR. In thyroidectomized rabbits, the FR set in sooner and ended earlier than in the control animals. The consumption of O<sub>2</sub> of rabbits with thyroidectomies remained practically unchanged during the FR, and after the end of FR it was lower than in the control rabbits. In rabbits, whose sympathetic systems were excised, thyroxine increased the consumption of O<sub>2</sub> during FR. After the removal of the cerebral cortex, a more acute, and occasionally unstable, course of FR was observed in dogs. Phenamine (amphetamine) and sodium amytal variably influenced the nature of FR both in the intact and decorticated animals. The shift caused weakening and even temporary loss of FR in dogs. The nature of FR depends on the activity of higher centres of the CNS. (S)

USSR/Human and Animal Physiology. Thermoregulation.

T-3

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55379.

Author : Gorbatsevich, L.I.

Inst :

Title : The Development and the Course of Fever as Influenced by the Removal of the Large Cerebral Hemispheres and by Some Pharmaceutical Substances.

Orig Pub: Byul. eksperim. biol. i meditsiny, 1957, 43, No 2, 35-39.

Abstract: A hyperthermia (the temperature was taken rectally) and an increase in the fluctuations of daily body temperatures were observed during the first month after a one-sided decortification of dogs. The febrile capacity, however, which was somewhat impaired at the beginning of the test, was restored after 1-2 months. When a both-sided decortification was performed, a

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USSR/Human and Animal Physiology. Thermoregulation.

T-3

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55379.

typical fever was observed 10-15 days after the operation. During the period of 1-4 months following the operation, the febrile capacity of the animals was increased at times and decreased at other times. An administration of phenamin (10 mg) caused a sharp temperature increase in cortexless dogs, and a milder temperature increase in intact animals. An administration of 0.5 gr of NaBr decreased, but an administration of a 0.1 dose increased the degree of the febrile reaction in intact as well as in cortexless dogs. A hypodermic injection of sodium amytal (0.05 gr/kg) caused a distinctly marked hypothermia in normal as well as in cortexless dogs. However, when a pyrogenic agent was injected while the animals were under an amytal narcosis, the

Card : 2/3

GORBATSEVICH, L.I.

Effect of embichine on experimental fever. Biul. eksp. biol. i  
med. 44 no. 11:69-71 N'57 (MIRA 11:11)

1. Iz otdela obshchey patologii (zav. - chlen-korrespondent AMN  
SSSR P.N. Veselkin) Instituta eksperimental'noy meditsiny AMN  
SSSR, Leningrad. Predstavlena deystvitel'nyy chlenom AMN SSSR  
S.V. Anichkovym.

(FEVER, experimental

eff. of embikhine (Rus))

(NITROGEN MUSTARDS, effects,

embikhin on exper. fever. (Rus))



GORBATSEVICH, L.I.

Development of febrile reactions in certain disorders of the higher nervous activity [with summary in English]. Zhur.vys.nerv.deiat. 9 no.1:99-106 Ja-F '59. (MIRA 12:3)

1. Section of General Pathology, Institute of Experimental Medicine U.S.S.R., Academy of Medical Sciences, Leningrad.

(FEVER, exper.

eff. of highernerv. activity disord. on febrile reactions in animals (Rus))

(CENTRAL NERVOUS SYSTEM, physiol.

higher nerv. activity disord., eff. on febrile reactions in animals (Rus))

GORBATSEVICH, L.I.

Effect of changes in food excitability on the course of a febrile  
reaction in dogs. Zhur.vys.nerv. deiat. 11 no.2:254-259 Mr-Apr '61.  
(MIRA 14:6)

1. Institute of Experimental Medicine, U.S.S.R. Academy of Medical  
Sciences, Leningrad.  
(CONDITIONED RESPONSE) (FEWER)

GORBATSEVICH, L.I.

Further observations on thermoregulation in decorticate animals.  
Fiziol.zhur. 47 no.5:598-604 My '61. (MIRA 14:5)

1. From the Department of General Pathology, Institute of Experimental Medicine, Leningrad.  
(BODY TEMPERATURE) (CEREBRAL CORTEX)

GORBATSEVICH, L.I.

(Leningrad)

Relationship between the nature of inflammatory reactions  
and the type of higher nervous activity in dogs. Pat. fiziol.  
i eksp. terap. 6 no.6:63-65 N-D'62 (MIRA 17:3)

1. Iz otdela obshchey patologii (zav. - chlen-korrespondent  
AMN SSSR prof. P.N. Veselkin) Instituta eksperimental'noy  
meditsiny AMN SSSR.

GORBATSEVICH, L.I.

Characteristics of the course of febrile reactions in various functional states of the digestive center. Biul. eksp. biol. i med. 53 no.5:37-41 My '62. (MIRA 15:7)

1. Iz otdela obshchey patologii (zav. - chlen-korrespondent AMN SSSR prof. P.M. Veselkin) Instituta eksperimental'noy meditsiny AMN SSSR, Leningrad. Predstavlena deystvitel'nym chlenom AMN SSSR P.S. Kupalovym.  
(FEVER) (DIGESTION)

GORBATSEVICH, L. S.

U.S.S.R. / Human and Animal Physiology. Thermoregulation. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22022.

Author : Gorbatshevich L.S.

Inst : Not given.

Title : Observation on Changes of Gaseous Metabolism and Body Temperature in Patients with Febrile Diseases of Various Etiology.

Orig Pub: Fisiol. mekhanizmy liknoradochn.reakcii. L. medgiz 1957 29-39.

Abstract: A comparative study of  $O_2$  requirements and changes of the internal and peripheral  $T^{\circ}$  was made in 16 patients with "aseptic" therapeutic fever, produced by intramuscular injection of 5% suspension of sulfur (sulfazine) or by electre-

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U.S.S.R. / Human and Animal Physiology. Thermoregulation.

Abs Jour: Ref Zhur-Biol., No 15, 1958, 22022.

Abstract: pyrexia, and in 36 patients with febrile diseases of various etiology. The relationship between deep and superficial temperatures varied individually in different phases of the febrile attack. The behavior of  $T^{\circ}$  curves, their parallelism and divergencies, etc. was studied. Following the injection of sulfazine there was an increase in  $O_2$  consumption during the period rising temperatures in almost all cases.  $O_2$  consumption decreased most at the peak of the febrile attack, and varied indifferently during the fall of  $T^{\circ}$ . The lack of definite correlation between intensive heat production and  $T^{\circ}$  changes in sulfazine fever negates a direct relationship between body  $T^{\circ}$  changes and the intensity of oxidative processes and points to the role of the heat loss processes.

Card 2/2

GORBATSEVICH, N.P., red.; KIRPATOVSAYA, Z.I., red.; MOISEYEV, I.N.,  
red.; BRAYNINA, M.I., tekhn. red.

[Hydrological yearbook] Gidrologicheskii ezhegodnik. Leningrad,  
Gidrometeor. izd-vo. 1958. Vol. 2. [Basin of the Black and  
Azov Seas (excluding the Caucasus)] Basseiny Chernogo i Azov-  
skogo morei (bez Kavkaza). No.4.5. [Dnieper River basin below  
the Pripet River] Bassein r. Dnepr nizhe r. Pripiat'. Pod red.  
N.P.Gorbatsevich i Z.I.Kirpatovskoi. 1961. 283 p.

(MIRA 15:4)

(Kara Sea--Hydrology) (Azov, Sea of--Hydrology)  
(Dnieper River--Hydrology)

YANOVSKIY, B.M.; GORBATSEVICH, S.V.; VOLKOV, N.A.; YUDIN, M.F., kand. tekhn. nauk, otv. red.; ZABORDINA, A.A., tekhn. red.

[Absolute measurements of electric currents] Absolutnye izmereniya sily toka. Moskva, Gos. energ. izd-vo, 1953. 124 p. (Leningrad. Vsesoiuznyi nauchno-issledovatel'skii institut metrologii. Trudy, no.15). (MIRA 11:5)

1. Direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta metrologii im. D.I. Mendeleeva (for Yudin).  
(Electric currents--Measurements)



1. MALIKOV, M.F., Prof.; GORBATSEVICH, S.V.; YUMATOV, A.A.; BIRZVALKS, YU.A.; POLIVANOV  
K.M., Prof
2. USSR (600)
4. Electric Measurements
7. Determining amperage - the fourth fundamental unit in the practical absolute unit system  
Prof. M.F. Malikov, S.V. Gorbatshevich, Engs. A.A. Yumatov, Yu. A. Birzvalks, Prof. K.M.  
Polivanov, Elek-trichestvo no. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

GORBATSEVICH, S. V. --"Reproduction of a Unit Current in Absolute Measure and Determination of Electromotive Force of Standard Normal Cells."  
\* (Dissertations for Degrees in Science and Engineering Defended at USSR Higher Educational Institutions) Committee on Standards, Measures, and Measuring Instruments of the Council of Ministers USSR, All-Union Scientific Res Inst of Metrology imeni D. I. Mendeleev, Leningrad, 1955

SO: Knizhnaya Letopis', No. 25, 18 Jun 55

\* For Degree of Doctor of Technical Sciences

GORBATSEVICH, S.V.

ARUTYUNOV, V.O.; GORBATSEVICH, S.V.; ZUBRILIN, V.P.; KOLOSOV, A.K.; ROMANOVA, M.F.; TIKHODRYEV, P.M.; CHERNYSHYEV, Ye.T.; SHIROKOV, K.P.; SHRAMKOV, Ye.G.; YANOVSKIY, B.M.

Mikhail Fedoseevich Malikov, on his 75th birthday. Izv. tekhn. no. 2:  
85-86 Mr-Apr '57. (MLRA 10:6)  
(Malikov, Mikhail Fedoseevich, 1882-)

GORBATSEVICH, S.V.; MYULLER, V.V.; LUK'YANOV, P.N.

Current balance and determination of the value of the volt standard.  
Trudy VNIIM no.31:5-18 '57. (MIRA 11:11)  
(Electric standards)

YANOVSKIY, B.M.; AMATUNI, N.L.; GORBATSEVICH, S.V.

Reproducing the electric resistance unit by means of calculated  
mutual inductance and frequency. Trudy VNIIM no.31:32-35 '57.  
(Electric resistance--Standards) (MIRA 11:11)

SHRAMKOV, Ye.G.; GORBATSEVICH, S.V.; KOLOSOV, A.K.; DROTKOV, I.N.; ROZHDESTVENSKAYA  
T.B.; SHIROKOV, K.P.; CHERNYSHEV, Ye.T.; YANOVSKIY, B.M.

Metrological activities in the field of electric and magnetic measure-  
ments. Trudy.VNIIM no.33:60-93 '58. (MIRA 11:11)

1. Rukovoditel' otдела elektricheskikh i magnitnykh izmereniy  
Vsesoyuznogo nauchno-issledovatel'skogo instituta metrologii imeni  
D.I. Mendeleeva (for Shramkov).  
(Electric measurements, (Magnetic measurements))

GORBATSEVICH, S.V.

Analyzing errors in measuring the e.m.f. of standard conventional elements on a current balance. Trudy VNIIM no.38: 5-20 '59. (MIRA 13:4)

(Electric measurements)

ARUTYUNOV, V.O.; GORBATSEVICH, S.V.; SHRAMKOV, Ye.G.; BURDUN, G.D.;  
KOLOSOV, A.K.

M.F.Malikov; obituary. Izv.tekh. no.4:61 Ap '60.  
(MIRA 13:8)

(Malikov, Mikhail Fedoseevich, 1882-1960)



GORBATSEVICH, S.V.; INDRIK, A.N.; PETUNOVA, A.I.

Standards of electrical resistance units. Trudy inst. Kom. stand., mer  
i izm. prib. no.39:5-11 '60. (MIRA 14:3)  
(Electirc Resistance--Standards)

GORBATSEVICH, S.V.

Systematic errors in the compensational method of comparing resistances.  
Trudy inst. Kom. stan., mer i izm. prib. no.39:12-16 '60.

(MIRA 14:3)

(Electric resistance)

S/058/62/000/003/002/092  
A061/A101

AUTHORS: Gorbatsevich, S. V., Shigorin, V. P.

TITLE: Method and apparatus for precision measurements of d-c resistances

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1962, 11, abstract 3A121 ("Tr. in-tov Kom-ta standartov, mer i izmerit. priborov pri Sov. Min. SSSR". 1961, no. 52 (112), 27-36)

TEXT: Non-integral rated resistances, i.e., different from  $10^k$  ( $k = \text{integer}$ ), could hitherto be measured with far less accuracy than integral rated ones. The method described, based on the use of the apparatus developed at the VNIIM, lowers the errors of measurement of such resistances to  $10^{-4} - 10^{-5}\%$ . The resistances can be measured with a bridge comparator, either single or double, depending on the magnitude of the resistance to be measured, and with a number of standard series-connected resistors, permitting any ratios to be obtained in the vicinity of that of the resistances compared. Also a standard resistor box was developed, much like a long sliding resistor, permitting the ratio of two resistors, measured and standard, to be read with high accuracy. Circuit

Card 1/2

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Method and apparatus ...

S/058/62/000/003/002/092  
A061/A101

diagrams and formulae for calculating the corrections are presented, as well as experimental data confirming the high accuracy of measurements.

K. Shirokov

[Abstracter's note: Complete translation]

Card 2/2

GORBATSEVICH, S.V.; LOPATNIKOVA, A.N.; SVETLAKOVA, I.F.; SHIGORIN, V.P.

Changeover in the U.S.S.R. to new electrical resistance standards.  
Trudy inst. Kom. stand. mer. i izm. prib. no.67:5-11 '62. (MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni  
Mendeleeva.

AMATUNI, N.L.; GORBATSEVICH, S.V.; MYULLER, V.V.; PETUNOVA, A.I.

Absolute determination of the e.m.f. value of standardized normal  
elements on electric scales using the absolute method. Nov.nauch.-  
issl.rab.po metr. VNIIM no.4:1-3 '64. (MIRA 18:3)

GORBATSEVICH, S.V.

Standards of basic units of the International System of Units  
and the guarantee of the unity of measurements in the U.S.S.R.  
Izm. tekhn. no. 10:50-54 0 '64 (MIRA 18:2)

L 34063-66

ACC NR: AR6017173

SOURCE CODE: UR/0058/65/000/012/A016/A016

AUTHOR: Gorbatsevich, S. V.

TITLE: Work of VNIIM in the field of fundamental constants

SOURCE: Ref. zh. Fizika, Abs. 12A180

REF SOURCE: Tr. in-tov Gos. kom-ta standartov, mer i izmerit. priborov SSSR, vyp. 76(136), 1965, 44-50

TOPIC TAGS: metrology, scientific standard, research facility

ABSTRACT: The author considers the present status and the historical aspect of the question of determination of certain physical concepts which are of great importance for metrology. Results are presented of the determination of the velocity of light  $c$  from 1949 through 1959. The status of the question of determining the Avogadro number  $N$  and of the Faraday number  $F$ , the gyromagnetic ratio of the proton  $\gamma$ , the acceleration of the force of gravity  $g$ , and other constants. The significance of work on the determination and refinement of physical constants as the basis for going over to natural standards is noted. The constants which can serve to the largest degree as a basis of units should be determined with the maximum possible accuracy in existing units in metrological organizations in which standards of physical units are stored and duplicated. M. Mekler. [Translation of abstract]

SUB CODE: 20

Cord 1/1



USSR/Human and Animal Morphology (Normal and Pathological) Nervous System.

S

Abs Jour : RefZhur - Biol., No 7, 1958, No 31174

Author : Gorbatsovich Z.N.

Inst : Not Given

Title : On the Question Concerning Interneuron Connections in the Superior Colliculi of Quadrigemina.

Orig Pub : Sb. tr. Kurskiy med. in-t, 1955, vyp. 2 (10), 196-198

Abstract : The superior colliculi were investigated of the quadrigemina of 13 dogs, 17 cats, two rabbits, as well as three adults and two children. In some animals enucleation of one eye (6 dogs) was performed, and in two kittens with unopened eyes the eyelids were sutured. In the superior colliculi of quadrigemina, loop-shaped and button synapses are often observed. In small cells, synapses possess a type of thick pericellular plexi of terminal fibrils. Synapses are rarely observed, in the form of "little chains" and of netlike plates. Axosomatic and axodendritic synapses are observed.

Cord : 1/2

USSR / Human and Animal Morphology. Nervous System. S-2  
Peripheral Nervous System.

Abs Jour: Ref Zhur-Biol., No 14, 1958, 64770.

Author : ~~Gorbatsavich, Z. N.~~

Inst : ~~Kursk Medical Institute.~~

Title : Some Data on the Innervation of the Optic Nerve.

Orig Pub: Sb. tr. Kurskiy Med. in-t, 1956, vyp. 11, 98-101.

Abstract: The optic nerve of the dog and of the cat has a rich intra-trunk innervation. The receptor nerve fibers and their terminals are located in the intra-fascicular connective tissue, and also penetrate into the fascicles of the optic fibers. The sector of the nerve trunk, located near the screen-like membrane, has an innervation so well developed that it constitutes its own reflexogenous zone. -- Ye. V. Ryzhkov.

Card 1/1

GORBATSEVICH, Z.N., dotsent; LUK'YANOVA, I.P., assistant

Some data on sensory innervation in the human sciatic nerve.  
Sbor. trud. Kursk. gos. med. inst. no.13:270-273 '58.

(MIRA 1413)

1. Iz kafedry gistologii (ispolyayushchiy obyazannosti zav. -  
dotsent Z.N.Gorbatsevich) Kurskogo gosudarstvennogo meditsinskogo  
instituta.

(SCIATIC NERVE)

GORBATSEVICH, Z.N.; LUK'YANOVA, I.P.

Sensory innervation of nerve trunks. Arkh. anat., gist. i  
embr. 43 no.8:43-47 Ag \*62. (MIRA 17:8)

1. Kafedra gistologii (ispolnyayushchiy obyazannosti zave-  
duyushchego dotsent Z.N. Gorbatsevich) Kurskogo gosudarstvennogo  
meditsinskogo instituta.

MISHKEVICH, Rakhil' Iosifovna, kand. tekhn.nauk; GAUPTMAN, Albert  
Genrikhovich, inzh.; GARSHIN, Anatoliy Petrovich, inzh.;  
GORBATSKAYA, Rozaliya Lazarevna, inzh.; COKOLOV, A.N., red.

[Technology of the oxidation and heat treatment of electrical steel and magnetic circuit cores] Tekhnologiya oksidirovaniia i termicheskoi obrabotki elektrotekhnicheskoi stali i serdechnikov magnitoprovodov. Leningrad, 1964. 26 p.  
(MIRA 17:9)

GORBATSKIY, G. V., VIZE, V. Yu., GORDUNOV, G.P., CORODKOV, B.N. and SAKS, V.N.

"The Soviet Arctic, Seas and Islands," a physical-geographical  
description, Moscow-Leningrad, 1946

Translation 716225, no date

1ST AND 2ND ORDERS										PROCESSING AND PROPERTIES INDEX										3RD AND 4TH ORDERS									
AMS/A+B										JAN 1951										M									
<p>21-156 551.582(94)  Vik. Vladimirovich Gorbatskiy, G. V. Gorbunov, G. P., et al., Klimat. (Climate.)  (In Sovetskaya Arktika i Gornaya. [Soviet Arctic, seas and islands.] Leningrad,  Isdatel'stvo Glavmorsputi, 1946. p. 32-52. fig. 3 photos, 2 charts, 11 tables, refs. p.  143-149.) DLC—A discussion of the general climatic features of the Soviet Arctic Regions,  based on the latest observational data, with respect to solar radiation, temperature, wind,  pressure, gales, blizzards, precipitation, cooling power, icing of surface objects, fog, etc. In  addition, there is a discussion of the characteristics of the various seasons in the Soviet Arctic.  Sample analytical tables show comparative conditions at Arctic land stations. Subject Head-  ings: Climatology, Arctic, U.S.S.R. —M.R.</p>																													
<p>ASR-5LA METALLURGICAL LITERATURE CLASSIFICATION</p>																													
1ST ORDER										2ND ORDER										3RD ORDER									
1 2 3 4 5 6 7 8 9 10										11 12 13 14 15 16 17 18 19 20										21 22 23 24 25 26 27 28 29 30									

GORBATSKIY, G. V.

Quaternary glaciation of northern Alaska. Uch.zap.Len.un. no.104:185-  
201 '49. (MIRA 10:1)  
(Alaska--Glacial epoch)



GORBATSKIY, G. V.

"Physiography of the (Foreign) Arctic," Geografiz, Moscow, 1951

Translation D 236614, 7-7-55

GORBATSKIY, G. V.

Arctic Regions

Some means of a physico-geographical study of the arctic land in connection with its fundamental natural features. Uch. zap. Len. un. No. 152, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

GORBATSKIY, G.V.; ISACHENKO, A.G. (Reviewers)

"Geographical survey" vol.22, 1950. Organ of the Polish Geographical Society. Reviewed by G.V.Gorbatskii, A.G.Isachenko.  
Izv.Vses.geog.ob-va 86 no.1:109-111 Ja-F '54. (MLRA 7:2)  
(Poland--Geography) (Geography--Poland)

GORBATSKIY, G.V.

Observations made on the southern outskirts of the Baltic Shield.  
Izv.Vses.geog.ob-va 89 no.3:229-234 My-Je '57. (MIRA 10:11)  
(Baltic Shield--Physical geography)

AUTHOR: Gorbatskiy, G.V.

12-1-8/26

TITLE: The So-Called **Penck** Glaciers of Novaya Zemlya and Some Features of Their Expansion Areas (Tak nazyvayemyye ledniki **Penka** na Novoy Zemle i nekotoryye cherty ikh rasprostraneniya)

PERIODICAL: Izvestiya Vsesoyuznogo Geograficheskogo Obshchestva, 1958, # 1, pp 55-58 (USSR)

ABSTRACT: The author took part in a physico-geographical expedition of the Arctic Institute in 1947 to the Yuzhnyy isle (southern part) of Novaya Zemlya, in the basin of the Bezmyannaya river. He compares the results of his investigations with those obtained by R.L. Samoylovich in 1923, who described the so-called Penck glacier in the southern part of Novaya Zemlya. The author expresses the opinion that the described snow-firn fields are not a glacier but that the ice layer discovered beneath two other layers of firn and snow, is the relic of an earlier, more or less compact, snow-firn field.

As a characteristic of this area the author mentions the development of cavity forming processes, which have been observed on a surprising large scale in the region of the Gribovaya Gulf, the Karstovaya river and the Bezmyannaya river valleys. The author states that the formation of cavities on

Card 1/2

12-1-8/26

The So-Called ~~Penck~~ Glaciers of Novaya Zemlya and Some Features of Their Expansion Areas

such a wide spread area is most unusual in these latitudes and believes that this process is obviously connected with the recent degradation of the frozen state and raised water temperatures on the dry land.

The author states that the landscape here is subject to rapid and considerable changes.

There is one chart and 1 Russian reference.

AVAILABLE: Library of Congress

Card 2/2

GORBATSKIY, G.V.

Expedition to the New Siberian Islands. Probl.Arkt. no.3:127-129 ' 58.  
(MIRA 12:1)

(New Siberian Islands--Scientific expeditions)

PAL4915

GORBATSKY, V.G.

USSR/Astronomy - Spectral Variation Sep/Oct 49  
Constellations,  
Study of

"Interpreting the Spectral Variation of Gamma-Cassiopeia," V. G. Gorbatsky, Astr Obs, Lenin-grad State U imeni A. A. Zhdanov, 13 pp

"Astron Zhur" Vol XXVI, No 5

Discusses influence of radiation of a shell upon a star's continuous spectrum. Gives observational data on variations in brightness and spectrum of Gamma-Cassiopeia for 1936 - 1941 (in graphs) and interprets its continuous spectrum. Discusses

14915

USSR/Astronomy - Spectral Variation Sep/Oct 49  
(Contd)

Intensity of bright lines of hydrogen. Mentions works of Baldwin (Ap. J.), Barbier and Chalonge (Ann. d'A. 1941, 1948), V. V. Sobolev (1947), V. G. Gorbatsky, Cilile (1932, 1936), E. R. Mustel, "Astron Zhur," 1941, 1944, and V. F. Gaze (1947).

14915



(3)  
Ionization in diffuse stellar envelopes. N. G. Gorbatskii.  
Uchenye Zapiski Leningrad. Gosudarst. Univ. A. A. Zhdan-  
ova, No. 136, Ser. Mat. Nauk No. 22, Trudy Astron. Ob-  
servatorii 15, 72-88 (1950).—When radiation equil. exists in  
a stellar envelope formed by ejection of matter from the  
star, each such envelope has a crit. temp. Below this  
temp. only the part of the envelope nearest the star is  
ionized. Above this temp. the entire envelope is highly  
ionized; the degree of ionization decreases from the star  
outward at a rate which varies inversely with temp. Math.  
results are applied particularly to class Be stars. C. F.

10/11/54 M

GORBATSKII, V. G.

PA 19474

USSR/Astronomy - Astrophysics Nov/Dec 51

"Interpretation of the Variations in the Spectrum of Cassiopeia," V. G. Gorbatskiy, Leningrad State University Zhurnal

"Astron Zhur" Vol XXVIII, No 6, pp 451-465.

In his previous work (cf. "Astron Zhur" Vol XVI, No 5, 1949) author considered observed variations during 1936-1940 as due to successive ejections of stellar shells. The non-stationary ejection of matter contradicts

1947

USSR/Astronomy - Astrophysics Nov/Dec 51  
(Contd.)

theory by O. Struve that ejection is due to star's fast rotation. Author thanks V. V. Sobolev for advice.

1947

GORBATSKIY, V. G.

PA 239T78

USSR/Astronomy - Nature of Stars

Nov/Dec 52

"Problem of Nature of Stars of the Type U Germinorum,"  
V. G. Gorbatskiy, Leningrad State U

"Astron Zhur" Vol 29, No 6, pp 682-688

This type of star is distinguished by flashes lasting about 24 hrs and slowly decaying with a statistically established relation bet the amplitude of flash and the interval bet them. Writer concludes from studies of SS Cygni, which is a white dwarf, that the radius of the star remains unchanged during the flash. Submitted 12 Jul 52.

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239T78

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SECRETARY IV V. G.

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000516110005-2"

GORBATSKIY, V.G.  
~~GORBATSKIY, V.G.~~

Interpretation of emission spectra of long-period variable stars  
[with summary in English]. Part I. Astron. zhur. 34 no.6:860-867  
N-D '57. (MIRA 11:2)

(Stars, Variable--Spectra)

3(1)

AUTHOR: Gorbatskiy, V.G.

SOV/33-35-5-8/20

TITLE: On the Interpretation of the Emission Spectrum of Long-Period Variable Stars. II (K interpretatsii spektra izlucheniya dolgoperiodicheskikh peremennykh zvezd. II)

PERIODICAL: Astronomicheskiy zhurnal, 1958, Vol 35, Nr 5, pp 748-754 (USSR)

ABSTRACT: The author discusses the origin of bright lines of ionized metals (e.g. Fe II) in the spectra of long-period variable stars which appear in the same layers of the stellar atmosphere as the bright lines of hydrogen. The author asserts that collisions with free electrons play the main role in the excitation of metallic atoms after maximum of light. The electron density decreases sharply from maximum to minimum of light due to the exhaustion of energy in the atmosphere. Therefore the number of deactivating collisions of excited atoms with electrons diminishes and the intensity of the Fe II lines relative to the intensity of the permitted lines increases. The author mentions the papers of G.A. Shajn [Ref 4] and V.A. Ambartsumyan [Ref 6]. There are 7 references, 3 of which are Soviet, and 4 American.

SUBMITTED: July 6, 1957

Card 1/1

GORBATSKIY, V.G.

Origin of [O I] and [Fe II] lines in postmaximum spectra of  
novae. Uch. zap. LGU no. 273:30-37 '58. (MIRA 12:1)  
(Stars, New--Spectra)



89507

3.1560 (1057, 1172, 1177)

S/043/60/000/001/013/014  
C 111/ C 333

AUTHOR: Gorbatskiy, V. G.

TITLE: On the radiation of Nova. I

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya matematiki,  
mekhaniki i astronomii, no. 1, 1960, 142-151

TEXT: In the present paper the author calculates the total mass of the material ejected by a Nova after outthrowing of the envelope. Furthermore the energy which is radiated by the star (at the expense of a partial transition of the kinetic energy into thermal energy). The result is summarized in the table;

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On the radiation of Nova. I

S/043/60/000/001/013/014  
C 111/ C 333

Table 2

Star	$Q \text{ g}$	$\frac{Q}{m}$	$E_{\text{rat}} \text{ erg}$	$q$
V 603 Aquila	$8.6 \cdot 10^{29}$	0.61	$1.8 \cdot 10^{45}$	$1.0 \cdot 10^{24}$
V 476 Grus	$5.6 \cdot 10^{28}$	0.19	$1.5 \cdot 10^{44}$	$1.6 \cdot 10^{23}$
DQ Hercules	$8.7 \cdot 10^{27}$	0.16	$1.0 \cdot 10^{43}$	$1.1 \cdot 10^{21}$
CP Lacerta	$5.0 \cdot 10^{29}$	0.71	$6.3 \cdot 10^{44}$	$5.8 \cdot 10^{23}$
GK Perseus	$8.8 \cdot 10^{28}$	0.12	$2.1 \cdot 10^{45}$	$2.7 \cdot 10^{22}$
RR Pictor	$2.2 \cdot 10^{29}$	0.31	$1.0 \cdot 10^{44}$	$2.3 \cdot 10^{22}$
CP Puppis	$1.8 \cdot 10^{29}$	0.47	$2.1 \cdot 10^{44}$	$1.4 \cdot 10^{23}$

Here  $m$  is the mass of the envelope,  $Q$  - - mass of the ejected matter,  
 $E_{\text{rat}}$  - - energy of radiation,  $\bar{q} = \frac{Q}{\Delta t}$ ,  $\Delta t$  - - time interval between  
Card 2/3

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S/043/60/000/001/013/014  
C 111/ C 333

On the radiation of Nova. I

occurrence of the main absorption spectrum and the moment where a clear measurement of the line displacement of this spectrum is still possible. The values of  $Q/m$  show that the mass of the matter which is ejected from the star after the maximum of light is smaller for most of the Novae than that ejected before the light-maximum. The author states that the radiation at the expense of the kinetic energy of the gas makes an essential part of the total radiation which the star radiates during the light-maximum and a little while afterwards.

V. V. Sobolev, E. R. Mustel' and J. M. Kopylov are mentioned in the paper.

There are 4 tables, 1 figure, and 6 references: 5 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: C. Payne-Gaposhkin. The Galactic Novae. Amsterdam, 1957.

SUBMITTED: May 14, 1959

Card 3/3

S/043/60/000/13/13/016  
C111/C222

AUTHOR: Gorbatskiy, V.G.

TITLE: On the Radiation of Novae. II<sup>12</sup>

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki,  
mekhaniki i astronomii, 1960, No. 13, pp. 131 - 140

TEXT: The paper is a continuation of (Ref. 1). There it was stated that the kinetic energy of clouds of gas ejected from a Nova after the separation of the envelope and which overtake the envelope, partially changes to heat energy. The radiation appearing thereby forms a great part of the total radiation of the star during the maximum of the brightness. Now the author investigates the process of the transformation of energy and the spectroscopic appearances combined with it. At first he estimates the thickness of the layer in which the transformation appears. Then he calculates the temperature of this layer by establishing the heat balance ; it results  $2 - 4 \cdot 10^5$  °K, so that the atoms of oxygen, nitrogen etc. are ionized highly. These results are compared with the observations and explain the appearance of spectral lines of highly

Card 1/2

✓ B

On the Radiation of Novae. II

S/043/60/000/13/13/016  
C111/C222

ionized atoms in the spectrum of the Nova a short time after the light-  
maximum.

The author mentions V.V. Sobolev. There is 1 figure, 1 table and 9 references:  
2 Soviet, 3 German, 1 Dutch and 3 American.

Card 2/2

✓B

GORBATSKIY, V. G.

"On the Brightness of Novae. II," by V. G. Gorbatskiy:--  
Leningrad, Vestnik Leningradskogo Universiteta No 13,  
Seriya Matematiki, Mekhaniki i Astronomii, No 3, 1960,  
pp 131-140

It is assumed that kinetic energy ejected from novae is partially converted into thermal energy after colliding with the envelope. The amount of emission produced as a result of this process has already been computed (Gorbatskiy, Vestnik LGU, No 1, 1960), and makes up a considerable part of the over-all emission of the star at light-maximum and immediately thereafter.

This work considers the process of transformation of kinetic energy into thermal energy and the spectroscopic phenomena associated with it. The thickness of the layer in which the energy transformation takes place is estimated, the temperature of the layer is established, and a study is made of the spectral peculiarities of novae resulting from the emission of this layer.

S/033/60/037/02/012/013  
E032/E914

AUTHOR: Gorbatskiy, V. G.

TITLE: First Meeting of the Commission for the Physics of Stars and Nebulae

PERIODICAL: Astronomicheskiy zhurnal, 1960, Vol 37, Nr 2, pp 360-362 (USSR) ✓

ABSTRACT: The meeting took place on July 17-19, 1959, at L'vov and was organized on the initiative of the Astronomical Council of the Academy of Sciences, USSR. The following persons were members of the Commission: Academicians V.A. Ambartsumyan and V. A. Fesenkov, Member-Correspondents of the Academy of Sciences USSR E. R. Mustel and V. V. Sobolev, Academician (Ac.Sc. Estonian SSR) A. Ya. Kipper, Prof. B. A. Vorontsov-Velyaminov, Prof. S. A. Kaplan, Prof. O. A. Mel'nikov, Dr. Phys. Mat. Sciences S. B. Pikelner, Doz. V. G. Gurbatskiy, Doz. V. A. Dombrovskiy, and Senior Scientific Worker D. A. Rozhkovskiy. In addition to organizational problems, the programme of the meeting included a symposium on "Contemporary Problems in Stellar Physics". Among those taking part

Card 1/7 ✓

S/033/60/037/02/012/013  
E032/E914

First Meeting of the Commission for the Physics of Stars and Nebulae in the symposium were representatives of many astronomical institutions (37 persons in all) including the Pulkovo Astronomical Observatory, Crimean Astrophysical Observatory, Burakan Astrophysical Observatory, Abastuman Astrophysical Observatory, Shternberg State Astronomical Institute, Astrophysical Institute of the Academy of Sciences Kaz.SSR, Leningrad University, Kiev University, Odessa University, I'vov University, and the Division of Astrobotany of the Academy of Sciences Kaz.SSR. The first session was concerned with nonthermal emission of stars and took place under the chairmanship of U. V. Sobolev. V. A. Ambartsumyan read a paper entitled "On the nature of blue galaxies". In this paper, a report was given of the Burakan Observatory programme in this field. The majority of the blue objects are found in the neighbourhood of elliptical galaxies or near SO spirals. The line  $\lambda 3727$  [OII] is found to be present

Card 2/7

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S/033/60/037/02/012/013  
E032/E914

First Meeting of the Commission for the Physics of Stars and Nebulae in the spectra of blue galaxies. Since in addition, the  $H_{\alpha}$  line is either absent or very weak, Ambartsumyan came to the conclusion that the  $\lambda 3727$  line is excited by a collision mechanism. Candidate Phys. Mat. Sciences L. V. Mirzoyan (Burakan Astrophysical Laboratory) gave a review of observational and theoretical work on the continuous emission in the spectra of stars of type T Tau, UV Cet, and similar types. These results appear to confirm the original suggestion of Ambartsumyan's on the nonthermal character of the continuous emission in these stars. Candidate Phys. Mat. Sciences Arakelyan (Burakan Astrophysical Observatory) spoke on the continuous emission of exploding stars. V. A. Dombrovskiy considered the polarization of the radiation emitted by stars. He came to the conclusion that the polarization of stellar radiation may largely be explained by the polarizing effect of the interstellar medium. In isolated cases, the polarization is due to the scattering of light on free electrons in stellar atmospheres. During the morning

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session on June 18, the chairman was V. A. Ambartsumyan and the session was concerned with the continuous spectrum of stars and stellar hydrodynamics. S. A. Kaplan read a paper entitled "The scattering of light in a medium with a moving boundary". The type of boundary considered was that between HI and HII regions. Some special solutions were reported. Dotsent I. N. Minin (Leningrad University) spoke on "The diffusion of radiation in a semi-infinite medium". V. V. Porfir'yev's paper (L'vov University) was concerned with "The structure of rotating stars". I. D. Kupo (Division of Astrobotany, Ac. Sc. Kaz. SSR) reported spectrophotometric results for 22 Oph (type Be). Dotsent A. A. Nikitin (Leningrad University) gave a review of the modern state of the problem of probabilities of atomic transitions under the title "Excitation and ionization in stellar atmospheres".

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Cand. Phys. Mat. Sciences A. A. Boyarchuk (Crimean Astrophysical Observatory) reported the results of a determination of the chemical composition of the atmospheres of B stars. The helium to hydrogen ratio for these stars was found to be 0.2. Cand. Phys. Mat. Sciences I. M. Kopilov (Crimean Astrophysical Observatory) estimated the electron densities in the atmospheres of hot stars (O5-F8). He finds that for super-giants  $1.5 \times 10^{12} < n_e < 4 \times 10^{13}$ , while for stars in the main sequence  $10^{13} < n_e < 8 \times 10^{14}$ . In her paper "On the variability of lines in the spectra of O stars", G. N. Kumaygorotskaya (Crimean Astrophysical Observatory) noted that changes in the intensity and contours of emission lines discovered in O stars by a number of workers are confirmed by spectroscopic observations of 10 stars of type O of which were obtained at the CAO. The session on June 19 was concerned with stars associated with nebulae, and was chaired by V. A. Dobrovskiy. Dr. Phys. Mat. Sciences I. S. Shklovskiy (Shternberg State Astronomical Institute) read a paper entitled "Corpuscular emission of early stars as a possible reason for the ultraviolet emission of nebulae". ✓

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First Meeting of the Commission for the Physics of Stars and Nebulae

Polarimetric studies of the planetary nebula NGC 7026 were reported by G. A. Gurzanyan, who found that the degree of polarization is 5%. In another paper he produced an explanation of this fact, based on the presence of synchrotron radiation in the continuous spectrum of the nebula, which may appear in the magnetic field of the nebula when relativistic electrons are emitted from its nucleus. D. A. Roshkovskiy spoke on "The dynamics of collisions of dark clouds with stars". The final two papers were by Cand. Phys. Mat. Sciences M. V. Dolidze (Abastuman) and E. V. Tuchinova (Kiev), who were concerned with the spatial distribution of stars with emissions in the  $H_{\alpha}$  line and the photometric study of planetary nebulae (NGC 6543, 6826, 7662) respectively. The next


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First Meeting of the Commission for the Physics of Stars and Nebulae  
meeting of the Commission will take place at the Burakan  
Astrophysical Observatory in September 1960. Additional  
members co-opted by the Commission are Dr. Phys. Mat.  
Sciences V. B. Nikonov and Cand. Phys. Mat. Sciences  
N. A. Razmadze. The Chairman of the Commission will be  
V. V. Sobolev.

SUBMITTED: August 13, 1959.



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GORBATSKIY, V.G.

Causes for the appearance of bright hydrogen lines in the spectra of long-period variable stars. Astron.zhur. 38 no.2:256-266 Mr-Apr '61. (MIRA 14:4)

1. Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova.  
(Stars, Variable—Spectra)

GORBATSKIY, V.G.

Characteristics of the nebular spectrum of novae, caused by the  
disturbance of radiative equilibrium in envelopes. Vest.LGU 16  
no.19:145-152 '61. (MIRA 14:10)

(Stars--Spectra)

S/033/61/038/001/019/019  
E032/E514

AUTHOR: Gorbatskiy, V. G.

TITLE: Second Meeting of the Commission on the Physics of Stars  
and Nebulae

PERIODICAL: Astronomicheskiy zhurnal, 1961, Vol.38, No.1,  
pp.202-205

TEXT: The second meeting of the Commission on the Physics of  
Stars and Nebulae took place at the Byurakanskaya observatoriya  
(Byurakan Observatory) on September 28-30, 1960. The meeting  
was largely concerned with the physics of nebulae. The program  
included design problems encountered in connection with new  
telescopes, for example, the 260 cm telescope imeni G. A. Shayn  
of the Krymskaya astrofizicheskaya observatoriya (Crimean  
Astrophysical Observatory) and the 100 cm Schmidt telescope of  
the Byurakan Observatory. At the invitation of the Commission  
delegates from the following establishments took part in the  
meeting: Pulkovskaya astronomicheskaya observatoriya (Pulkovo  
Astronomical Observatory), Crimean Astrophysical Observatory,  
Byurakanskaya astrofizicheskaya observatoriya (Byurakan Astrophysical  
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E032/E514

**Second Meeting of the Commission on the Physics of Stars and  
Nebulae**

Observatory), GAISH (State Astronomical Institute imeni P.K. Shternberg), Leningradskiy universitet (Leningrad University), Abastumanskaya astrofizicheskaya observatoriya (Abastuman Astrophysical Observatory), Astrofizicheskiy institut AN KazSSR (Astrophysical Institute AS KazSSR), Astrofizicheskaya observatoriya AN AzSSR (Astrophysical Observatory AS AzSSR), Institut fiziki i astronomii AN EstSSR (Institute of Physics and Astronomy, AS EstSSR), Astrofizicheskaya laboratoriya AN LatvSSR (Astrophysical Laboratory AS LatvSSR), Astronomicheskaya observatoriya AN UkrSSR (Astronomical Observatory AS UkrSSR), Odesskiy universitet (Odessa University) and Kiyevskiy universitet (Kiyev University). Over forty persons from these institutions took part. The first session of the meeting was presided over by the Corresponding Member of the Academy of Sciences USSR, V. V. Sobolev and was concerned with cometary and planetary nebulae. Among the papers read were the following: Doctor of Physico-Mathematical Sciences G. A. Gurzadyan "Cometary Nebulae". Post-graduate Student E. S. Parsamyan (Byurakan Observatory) "Colorimetric study of some cometary nebulae"

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Second Meeting of the Commission on the Physics of Stars and Nebulae (NGC 2261, 2245, 2247). Doctor of Physico-Mathematical Sciences S. B. Pikel'ner spoke about the difficulties which arise in connection with the application of the theory of synchrotron radiation from relativistic electrons to cometary nebulae. Academician V. A. Ambartsumyan emphasized that the radiation emitted by cometary nebulae cannot be explained by the reflection of the emission of the central star. Candidate of Physico-Mathematical Sciences N. A. Razmadze "Spectrophotometry of some weak planetary nebulae". Professor B. A. Vorontsov-Vel'yaminov "Two planetary nebulae with variable spectra" (IC 4997 and NGC 6905). Senior Laboratory Technician G. S. Khromov (GAISH) "Changes in the spectra of the planetary nebulae IC 4997 and NGC 6905". Junior Scientist V. I. Pronik (Crimean Astrophysical Observatory) "Corpuscular emission of the nucleus and the electron temperature in the case of the planetary nebula IC 418". Corresponding Member of the Academy of Sciences USSR E. R. Mustel' suggested the formation of a "planetary nebula service" for studying their variability. Professor B. V. Kukarkin spoke on new

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EO32/E514

Second Meeting of the Commission on the Physics of Stars and Nebulae  
interesting data obtained by Czech astronomers in connection with  
the distribution of weak planetary nebulae in the southern hemisphere.

The second session of the meeting was concerned with the lumin-  
escence of nebulae and was chaired by Academician A. Ya. Kipper  
(AS EstSSR). Among the papers read at this session were:

V. V. Sobolev "On the emission of spherical nebulae".

Professor S. A. Kaplan and V. N. Siver "On the emission of nebulae  
with non-stationary ionization". Senior Scientist V. V. Ivanov  
(Leningrad University) "Diffusion of resonance radiation in nebulae".  
Junior Scientist P. K. Sorgsepp (Institute of Physics and Astronomy,  
AS EstSSR) "On the width of spectral lines in the case of two-photon  
emission".

The third session was concerned with dust nebulae and was opened by  
V. B. Nikonov (Doctor of Physico-Mathematical Sciences). Among  
the papers read at this session were: Senior Scientist D.A. Rozhkov-  
skiy "Photometric study of reflecting nebulae". Senior Scientist  
I. N. Minin (Leningrad University) "Optical properties of dust  
nebulae". Senior Scientist G. M. Idlis (Astrophysical Institute

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Second Meeting of the Commission on the Physics of Stars and Nebulae AS KazSSR) "Diffuse matter in globular clusters". V. V. Sobolev took part in the discussion on the papers by Rozhkovskiy and Minin and pointed out that this work should lead to the scattering function (indicatrix). I. S. Shklovskiy questioned the supposition that diffuse nebulae do in fact consist of dust. The fourth session was concerned with the physics of diffuse nebulae and was chaired by G. A. Gurzadyan and S. B. Pikel'ner. Among the papers read were the following: Doctor of Physico-Mathematical Sciences I. S. Shklovskiy (GAISH) spoke on the possible change in the luminosity of the Crab nebula. Senior Scientist P. V. Shcheglova (GAISH) "Studies of nebulae using the electron-telescopic method". V. F. Yesipova (GAISH) "The spectrum of the Orion nebula in the region 9000 to 11000 Å". Junior Scientist Yu. N. Pariyskiy (Pulkovo Observatory) "The model of the Orion nebula based on radio data". Junior Scientists R. Ye. Gershberg and L. P. Metik (Crimean Astrophysical Observatory) "Densities and masses of diffuse nebulae". V. I. Pronik and R. Ye. Gershberg "Diffuse nebulae and models of early stars". R. Ye. Gershberg "Formation of peripheral nebulae".  
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